

**LAKE HAVASU CITY, ARIZONA**  
**SYSTEM NUMBER AZ 04-08-022**

**2018 Annual**  
**Drinking Water Quality Report**

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**Este reporte contiene información importante sobre su agua para tomar. Si no entiende inglés, por favor busque a alguien que le traslada el reporte y le explique la información a usted.**

The annual **Consumer Confidence Report** is mandated by the United States Environmental Protection Agency (EPA), as a means of sharing information with residents regarding Lake Havasu City's water quality. This report is designed to give you, the consumer, all pertinent information relative to the production and distribution of safe drinking water for Lake Havasu City.

**Our Water Source:**

Our groundwater supply draws water from the **Colorado River Aquifer**, with an annual allocation of 28,581 acre-feet or 9.3 billion gallons of water a year. Currently the city utilizes as the primary source of drinking water the horizontal collector well, that is capable of producing 26 million gallons a day (mgd). Nine of the city's original wells used prior to the collector well are now maintained as a backup supply capable of producing 20 mgd. Lake Havasu City distributes its water through 483 miles of water distribution lines ranging from 4-inches to 36-inches in diameter serving just over 32,000 residential and commercial water services. Twenty-six water tanks totaling 22 million gallons of water storage serve the city's seven pressure zones.

**Drinking Water Sources**

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground it dissolves naturally occurring minerals, and in some cases radioactive material and can pick up substances resulting from the presence of animals or from human activity. In order to ensure that tap water is safe to drink, EPA prescribes Regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

**Drinking Water Contaminants:**

**Microbial contaminants:** Such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants:** Such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides:** Such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources.

**Organic chemical contaminants:** Such as synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

**Radioactive contaminants:** That can be naturally occurring or can be the result of oil and gas production and mining activities.

**Vulnerable Population**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV, AIDS, or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants, call the **EPA Safe Drinking Water Hotline, 1-800-426-4791** or by visiting, [www.epa.gov/sdwa](http://www.epa.gov/sdwa).

### **SOURCE WATER ASSESSMENT (HIGH RISK)**

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination. Further source water assessment documentation can be obtained by contacting **ADEQ**.

### **WATER SAMPLING**

Contaminants in your drinking water are routinely monitored according to Federal and State laws. The State of Arizona requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some data, though representative, may be more than one-year-old.

### **WATER TREATMENT PLANT**

Lake Havasu City's water treatment plant is designed for a production capability of up to 26 mgd. Water was produced at an average of 12.66 million gallons per day in 2018 to satisfy the city's potable water needs. The plant is designed primarily to remove manganese from Lake Havasu City's drinking water supply and to reduce arsenic levels to meet the EPA established MCL standard of 10. ppb (ug/L). We are pleased to report that manganese is reduced to a virtual "non-detect" level, with the treatment process removing approximately 279,580 pounds of manganese sludge from the city's water in 2018. The treatment process lowers arsenic levels well under the federal standard.

### **DEFINITIONS**

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water

**Level 1 Assessment:** A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present

**Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria was present

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health

**Maximum Residual Disinfectant Level (MRDL):** The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur

**Minimum Reporting Limit (MRL):** The smallest measured concentration of a substance that can be reliably measured by a given analytical method

**Millirems per year (MREM):** A measure of radiation absorbed by the body

**Not Applicable (NA):** Sampling was not completed by regulation or was not required

**Not Detected (ND or <):** Not detectable at reporting limit

**Nephelometric Turbidity Units (NTU):** A measure of water clarity

**Million fibers per liter (MFL):** Measure of Asbestos

**Picocuries per liter (pCi/L):** Measure of the radioactivity in water

**ppm:** Parts per million or Milligrams per liter (mg/L)

**ppb:** Parts per billion or Micrograms per liter (µg/L)

**ppt:** Parts per trillion or Nanograms per liter (ng/L)

**ppq:** Parts per quadrillion or Picograms per liter (pg/L)

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

### **LEAD INFORMATION STATEMENT:**

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lake Havasu City Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)

### Water Quality Data – Regulated Contaminants

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
E. Coli	N	0	N/A	0	0	Human and animal fecal waste	
Fecal Indicator (From GWR source) (coli phage, enterococci and/or E. coli)	N	0	N/A	0	0	Human and animal fecal waste	
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	N	0.46	.02 – 1.70	4	0	09/2018	Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Halo acetic Acids (HAA5) (ppb)	N	13	6.1-13	60	N/A	08/2018	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	77	49-77	80	N/A	02/2018	Byproduct of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90 <sup>th</sup> Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	0.35	1	1.3	1.3	08/2017	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	4.4	1	15	0	08/2017	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	N	1.2	0.6 ± 1.2	15	0	03/2014	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	0.4	ND - .04	5	0	03/2014	Erosion of natural deposits
Uranium (µg/L)	N	6.8	.00038 – 6.8	30	0	03/2014	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic <sup>1</sup> (ppb)	N	6.35	5.1-8.9	10	0	02/2018	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.046	0.046	2	2	01/2017	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	2.6	2.6	100	100	01/2017	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	0.60	0.60	4	4	01/2017	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

<i>Inorganic Chemicals (IOC) cont.</i>	<b>MCL Violation</b> Y or N	<i>Running Annual Average (RAA) OR Highest Level Detected</i>	<i>Range of All Samples (Low-High)</i>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
<i>Nickel (ppm)</i>	<b>N</b>	<b>0.0024</b>	<b>0.0024</b>	<b>NONE</b>	<b>NONE</b>	<b>01/2017</b>	<b>Erosion of natural deposits.</b>
<i>Nitrate<sup>2</sup> (ppm)</i>	<b>N</b>	<b>1.1</b>	<b>1.1</b>	<b>10</b>	<b>10</b>	<b>01/2017</b>	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<i>Selenium (ppb)</i>	<b>N</b>	<b>1.7</b>	<b>1.7</b>	<b>50</b>	<b>50</b>	<b>01/2017</b>	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
<i>Sodium (ppm)</i>	<b>N</b>	<b>140</b>	<b>140</b>	<b>NONE</b>	<b>NONE</b>	<b>01/2017</b>	Erosion of natural deposits

<sup>1</sup> **Arsenic** is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water, and continues to research the health effects of low levels of arsenic.

<sup>2</sup> **Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause "blue baby syndrome." Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

<b>Violation type</b>	<b>Explanation, health effects</b>	<b>Time period</b>	<b>Corrective actions</b>
Reporting failure	N/A	05/2018	Late Submittal

***Lake Havasu City's drinking water is in compliance with all State and Federal drinking water standards***

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Lake Havasu City residents concerned about the quality of water in Lake Havasu City, or with questions regarding the information contained in this report, may contact:

Lake Havasu City – Water Division  
Alex Mares, Utility Supervisor  
(928) 855-2618

All water consumers may learn more about the City's efforts to provide safe drinking water by attending the regularly scheduled City Council meetings when water issues or projects are included on the agenda. The City Council meets each month on the second and fourth Tuesday, at 6 p.m., at the Lake Havasu City Police Facility, 2360 McCulloch Boulevard.

Agendas for these meetings are posted at city hall, the post office, the police facility, and in the local newspaper.

This report may also be reviewed on the city's web site: [www.lhcaz.gov](http://www.lhcaz.gov)

**NEXT REPORT ON SAFE DRINKING WATER: JUNE 30, 2020**